

CLAIM LISTINGS

Pursuant to 37 CFR §1.121(c), this listing of the claims, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Please amend claims 1, 5-7, 9-14, 16-19, 21-23, 27-28, and 31, and cancel claims 4, 8, 15 and 20 without prejudice or disclaimer as follows:

1. (Currently Amended) A terminal registration method using a session initiation protocol, comprising:

transmitting a media access control address to a session initiation protocol server by a terminal in a voice over Internet protocol system including the terminal and the session initiation protocol server;

retrieving a database comprising terminal information ~~[[of]]~~ for the terminal in accordance with the media access control address, and transmitting to the terminal, from the session initiation protocol server receiving the media access control address from the terminal, the terminal information ~~[[of]]~~ for the terminal ~~corresponding to~~ in accordance with the received media access control address ~~to the terminal by the session initiation protocol server receiving the media access control address from the terminal;~~

transmitting to the session initiation protocol server, from the terminal, a register message including the obtained terminal information and ~~designating~~ including a first predetermined value assigned~~[[with]]~~ to a field value of a telephone number field ~~to the session initiation protocol server by the terminal;~~

retrieving the database, and transmitting to the terminal, from the session initiation protocol sever receiving ,from the terminal, the register message including the terminal information and

18 including the first predetermined value assigned to the field value of the telephone number field, a
19 second field value of the telephone number field and [[a]] user registration information in accordance
20 with the terminal information received from the terminal to the terminal by the session initiation
21 protocol server receiving the register message including the terminal information and designating the
22 first predetermined value with the field value of the telephone number field from the terminal;

23 requesting, at the terminal, the session initiation protocol server to perform registration by
24 using the ~~received~~ user registration information received by the terminal; [[and]]

25 performing the registration of the terminal, and transmitting to the terminal, from the session
26 initiation protocol server receiving, from the terminal, a registration request signal including the user
27 registration information, a registration success message ~~to the terminal by the session initiation~~
28 ~~protocol server receiving a registration request signal including the user registration information~~
29 ~~from the terminal; and~~

30 the steps of retrieving the database, and transmitting the user registration information further
31 comprising the sub-steps of:

32 parsing the register message, and requesting a location server,
33 at the session initiation protocol server receiving, from the terminal,
34 the register message including the terminal information and including
35 the first predetermined value, to transmit the user registration
36 information in accordance with the terminal information;

37 retrieving the database, and transmitting to the session
38 initiation protocol server, at the location server requested by the
39 session initiation protocol server to transmit the user registration
40 information, the user registration information in accordance with the

41 terminal information; and
42 transmitting to the terminal, from the session initiation
43 protocol server receiving, from the location server, the user
44 registration information, the received user registration information.

1 2. (Original) The method of claim 1, wherein the terminal information includes Internet
2 protocol address, Subnet, and domain name server information of the terminal.

3. (Canceled)

1 4. (Canceled)

1 5. (Currently Amended) The method of claim 1, ~~wherein~~ with the first predetermined value
2 transmitted to the session initiation protocol server from the terminal in the step of transmitting the
3 register message ~~[[is]]~~ being a predetermined ~~unused~~ telephone number unused by users.

1 6. (Currently Amended) The method of claim 1, ~~wherein the step of~~ during the transmission
2 of transmitting the media access control address from the terminal to the session initiation protocol
3 server ~~from the terminal of the step of transmitting the media access control address~~, the media
4 access control address ~~[[is]]~~ being transmitted by using a broadcasting method.

1 7. (Currently Amended) The method of claim 1, wherein the step of retrieving the database,
2 and transmitting terminal information ~~[[of]]~~ for the terminal comprises the sub-steps of:

3 transmitting to the location server, from the session initiation protocol server receiving the
4 media access control address from the terminal, the received media access control address ~~to the~~
5 ~~location server by the proxy server receiving the media access control address from the terminal;~~
6 retrieving the database, and transmitting to the session initiation protocol server, from the
7 location server receiving the media access control address from the session initiation protocol server,
8 the terminal information in accordance with the received media access control address ~~to the proxy~~
9 ~~server by the location server receiving the media access control address from the proxy server; and~~
10 transmitting to the terminal, from the session initiation protocol server receiving the terminal
11 information from the location server, the received terminal information ~~to the terminal by the proxy~~
12 ~~server receiving the terminal information from the location server.~~

1 8. (Canceled)

1 9. (Currently Amended) The method of claim [[8]] 1, ~~wherein~~ with a message used to
2 transmit the user registration information to the terminal from the proxy server [[is]] being "401
3 Error Message".

1 10. (Currently Amended) The method of claim [[8]] 1, ~~wherein~~ with a message used to
2 ~~transmit~~ carry the user registration information ~~to the terminal~~ from the [[proxy]] session initiation
3 protocol server to the terminal [[is]] being an error message.

1 11. (Currently Amended) The method of claim 1, wherein the step of performing the
2 registration of the terminal, and transmitting [[a]] the registration success message comprises the

sub-steps of:

transmitting ~~a received registration message~~ to the location server, ~~[[by]]~~ from the ~~[[proxy]]~~
session initiation protocol server receiving, from the terminal, [[the]] a registration message
including the user registration information ~~from the terminal, the received registration message;~~

comparatively analyzing the registration message by parsing the registration message,
performing registration ~~[[if]]~~ when the registration message is successful, and transmitting to the
session initiation protocol server, from the location server, a success message ~~to the proxy server by~~
~~the location server;~~ and

transmitting the received success message from the session initiation protocol server to the
terminal ~~by the proxy server.~~

12. (Currently Amended) The method of claim 1, wherein a request message ~~includes~~
comprises at least a sequence number, an identification, and an media access control address; and
a response message ~~includes~~ comprises at least a sequence number, an identification, and a
reason.

13. (Currently Amended) A computer-readable medium having computer-executable
instructions for performing a method, the method comprising:

transmitting a first address from a terminal to a session initiation protocol server ~~by a~~
~~terminal;~~

retrieving a database containing terminal information for the terminal in accordance with the
first address, and transmitting the terminal information ~~[[of]]~~ for the terminal ~~corresponding to the~~
~~received in accordance with the~~ first address ~~to the terminal~~ received by the session initiation

8 ~~protocol server receiving the first address from the terminal by retrieving a database containing~~
9 ~~terminal information of the terminal in accordance with the media access control address;~~

10 transmitting to the session initiation protocol server, from the terminal, a register message
11 including the ~~obtained~~ terminal information and ~~designating~~ including a first predetermined value
12 ~~[[with]] assigned to a field value of a telephone number field to the session initiation protocol server~~
13 ~~by the terminal;~~

14 transmitting to the terminal, from the session initiation protocol sever receiving, from the
15 terminal, the register message including the terminal information and including the first
16 predetermined value assigned to the field value of the telephone number field, a second
17 predetermined value of the telephone number field and user registration information in accordance
18 with the terminal information received from the terminal ~~to the terminal by the session initiation~~
19 ~~protocol sever receiving the register message including the terminal information and designating the~~
20 ~~first predetermined value with the field value of the telephone number field from the terminal;~~

21 requesting, at the terminal, the session initiation protocol server to perform registration by
22 using the ~~received~~ user registration information received by the terminal; ~~[[and]]~~

23 performing the registration of the terminal, and transmitting to the terminal, from the session
24 initiation protocol server receiving, from the terminal, a registration request signal including the user
25 registration information, a registration success message ~~to the terminal by the session initiation~~
26 ~~protocol server receiving a registration request signal including the user registration information~~
27 ~~from the terminal; and~~

28 the steps of retrieving the database, and transmitting the user registration information further
29 comprising the sub-steps of:

30 parsing the register message, and requesting a location server,

31 at the session initiation protocol server receiving, from the terminal,
32 the register message including the terminal information and including
33 the first predetermined value, to transmit the user registration
34 information in accordance with the terminal information;

35 retrieving the database, and transmitting to the session
36 initiation protocol server, at the location server requested by the
37 session initiation protocol server to transmit the user registration
38 information, the user registration information in accordance with the
39 terminal information; and

40 transmitting to the terminal, from the session initiation
41 protocol server receiving, from the location server, the user
42 registration information, the received user registration information.

1 14. (Currently Amended) The computer-readable medium having computer-executable
2 instructions for performing the method of claim 13, wherein the step of retrieving the database, and
3 transmitting terminal information of the terminal comprises the sub-steps of:

4 ~~transmitting the received first address~~ to the location server, [[by]] from the [[proxy]] session
5 initiation protocol server receiving the first address from the terminal, the received first address;

6 retrieving the database, and transmitting to the session initiation protocol server, from the
7 location server receiving the first address from the session initiation protocol server, the terminal
8 information in accordance with the received first address to the proxy server by the location server
9 receiving the first address from the proxy server; and

10 transmitting ~~the received terminal information~~ to the terminal, from [[by]] the [[proxy]]

11 session initiation protocol server receiving the terminal information from the location server, the
12 received terminal information.

1 15. (Canceled)

1 16. (Currently Amended) The computer-readable medium having computer-executable
2 instructions for performing the method of claim [[15]] 13, ~~wherein with~~ a message used to transmit
3 the user registration information to the terminal from the proxy server [[is]] being an error message.

1 17. (Currently Amended) The computer-readable medium having computer-executable
2 instructions for performing the method of claim [[15]] 13, wherein the step of performing the
3 registration of the terminal, and transmitting a registration success message comprises the sub-steps
4 of:

5 transmitting ~~a received registration message~~ to the location server, from [[by]] the [[proxy]]
6 session initiation protocol server receiving, from the terminal, [[the]] a registration message
7 including the user registration information ~~from the terminal~~, the received registration message;

8 comparatively analyzing the registration message by parsing the registration message,
9 performing registration [[if]] when the registration message is successful, and transmitting to the
10 session initiation protocol server, from the location server, a success message ~~to the proxy server by~~
11 ~~the location server~~; and

12 transmitting the received success message from the session initiation protocol server to the
13 terminal ~~by the proxy server~~.

1 18. (Currently Amended) A computer-readable medium having stored thereon a data
2 structure, comprising:

3 a first field containing data representing ~~transmitting a transmission of~~ a media access control
4 address ~~from a terminal~~ to a session initiation protocol server ~~by a terminal~~;

5 a second field containing data representing ~~retrieving a retrieval of~~ a database comprising
6 terminal information ~~[[of]] for~~ the terminal in accordance with the media access control address, and
7 ~~transmitting a transmission, to the terminal, from the session initiation protocol server receiving the~~
8 ~~media access control address from the terminal, of the~~ terminal information ~~[[of]] for~~ the terminal
9 corresponding to the received media access control address ~~to the terminal by the session initiation~~
10 ~~protocol server receiving the media access control address from the terminal~~;

11 a third field containing data representing ~~transmitting a transmission, from the terminal to~~
12 ~~the session initiation protocol server, of~~ a register message including ~~comprising~~ the obtained
13 terminal information and ~~designating~~ a first predetermined value ~~assigned to~~ ~~[[with]]~~ a field value
14 of a telephone number field ~~to the session initiation protocol server by the terminal~~;

15 a fourth field containing data representing ~~retrieving a retrieval of~~ a database, and
16 ~~transmitting a transmission, to the terminal, from the session initiation protocol sever receiving, from~~
17 ~~the terminal, the register message comprising the terminal information and the first predetermined~~
18 ~~value assigned to the field value of the telephone field, of~~ a second predetermined value of the
19 telephone number field and user registration information in accordance with the terminal information
20 received from the terminal ~~to the terminal by the session initiation protocol sever receiving the~~
21 ~~register message including the terminal information and designating the first predetermined value~~
22 ~~with the field value of the telephone field from the terminal~~;

23 a fifth field containing data representing ~~requesting a request, made by the terminal, for~~

24 requesting the session initiation protocol server to perform registration by using the received user
25 registration information by the terminal; [[and]]

26 a sixth field containing data representing ~~performing~~ the registration of the terminal, and
27 ~~transmitting a transmission, to the terminal, from a registration success message to the terminal by~~
28 the session initiation protocol server receiving, from the terminal, a registration request signal
29 including the user registration information ~~from the terminal, of a registration success message; and~~
30 the fourth field further comprising:

31 a first sub-field containing data representing a parse of the
32 register message, and a request made by the session initiation protocol
33 server receiving, from the terminal, the register message including the
34 terminal information and including the first predetermined value
35 assigned to the field value of the telephone number field, for
36 requesting a location server to transmit the user registration
37 information in accordance with the terminal information;

38 a second sub-field containing data representing the retrieval
39 of the database, and the transmission, to the proxy server, from the
40 location server requested to transmit the user registration information
41 from the proxy server, of the user registration information in
42 accordance with the terminal information; and

43 a third sub-field containing data representing the transmission,
44 to the terminal, from the proxy server receiving, from the location
45 server, the user registration information, of the received user
46 registration information.

1 19. (Currently Amended) The computer-readable medium having stored thereon the data
2 structure of claim 18, wherein the second field comprises:

3 a ~~[[first]]~~ fourth sub-field containing data representing a transmission to the location server,
4 from the session initiation protocol server receiving, from the terminal, the media access control
5 address, of transmitting ~~[[the]]~~ a received media access control address to the location server by the
6 proxy server receiving the media access control address from the terminal;

7 a ~~second~~ fifth sub-field containing data representing the retrieval of retrieving the database,
8 and a transmission, to the session initiation protocol server, from the location server receiving the
9 media access control address from the proxy server, of the transmitting terminal information in
10 accordance with the received media access control address ~~to the proxy server by the location server~~
11 ~~receiving the media access control address from the proxy server; and~~

12 a ~~[[third]]~~ sixth sub-field containing data representing the transmission, to the terminal, from
13 the session initiation protocol server receiving the terminal information from the location server, of
14 transmitting the received terminal information to the terminal by the proxy server receiving the
15 terminal information from the location server.

1 20. (Canceled)

1 21. (Currently Amended) The computer-readable medium having stored thereon the data
2 structure of claim ~~[[20]]~~ 18, wherein the sixth field comprises:

3 a ~~[[first]]~~ seventh sub-field containing data representing a transmission transmitting, to the
4 location server, from the session initiation protocol server receiving, from the terminal, a registration

5 message including the user registration information, [[a]] of the received registration message to the
6 location server by the proxy server receiving the registration message including the user registration
7 information from the terminal; and

8 a second an eighth sub-field containing data representing a comparative[[ly]] analysis of
9 analyzing the registration message by parsing the registration message, performing registration [[if]]
10 when the registration message is successful, and transmitting a success message to the [[proxy]]
11 session initiation protocol server by the location server.

1 22. (Currently Amended) The computer-readable medium having stored thereon the data
2 structure of claim 21, wherein the sixth field further comprises:

3 a [[third]] ninth sub-field containing data representing a transmission of ~~transmitting~~ the
4 received success message from the session initiation protocol server to the terminal ~~by the proxy~~
5 ~~server~~.

1 23. (Currently Amended) A voice over Internet protocol system, comprising:

2 a session initiation protocol server; and

3 a terminal transmitting a media access control address to the session initiation protocol
4 server,

5 with the session initiation protocol server retrieving a database comprising terminal
6 information [[of]] for the terminal in accordance with the media access control address, and the
7 session initiation protocol server transmitting, to the terminal, the terminal information [[of]] for the
8 terminal corresponding to the received media access control address ~~to the terminal,~~

9 with the terminal transmitting a register message including the obtained terminal information

10 and ~~designating~~ a first predetermined value assigned to ~~[[with]]~~ a field value of a telephone number
11 field to the session initiation protocol server,

12 with the session initiation protocol server retrieving the database, and the session initiation
13 protocol server transmitting, to the terminal, a second predetermined value of the telephone number
14 field and user registration information in accordance with the terminal information received from
15 the terminal ~~to the terminal and designating the first predetermined value with the field value of the~~
16 ~~telephone number field from the terminal,~~

17 with the terminal requesting the session initiation protocol server to perform registration by
18 using the received user registration information, and

19 with the session initiation protocol server performing the registration of the terminal and
20 transmitting a registration success message to the terminal.

1 24. (Original) The system of claim 23, wherein the terminal information includes Internet
2 protocol address, Subnet, and domain name server information of the terminal.

25. (Canceled)

1 26. (Original) The system of claim 25, wherein the first predetermined value transmitted to
2 the session initiation protocol server from the terminal in the step of transmitting the register
1 message is an unused telephone number.

1 27. (Currently Amended) A method, comprising:

2 obtaining ~~[[a]]~~ terminal information, with the step of obtaining the terminal information

3 performed by:

4 obtaining a certain set of information ~~[[of]]~~ for a terminal and
5 a server by using a media access control address;

6 transmitting to a proxy server, ~~the media control address by~~
7 from the terminal and at least one of a plurality of access points, the
8 media control address ~~to a proxy server~~;

9 requesting by the proxy server ~~[[to]]~~ for a location server to
10 transmit terminal information in accordance with ~~[[the]]~~ a received
11 media access control address;

12 transmitting to the terminal, ~~[[by]]~~ from the location server,
13 ~~to the terminal~~ of certain information retrieved from a database of the
14 terminal in accordance with the media access control address, and
15 ~~[[with]]~~ the database comprising the terminal information ~~[[of]]~~ for
16 the terminal in accordance with the media access control address; and

17 transmitting to the access points, the certain information
18 retrieved from the database of the terminal ~~to the access points~~, and
19 the access points transmitting, to the terminal, the certain information
20 ~~[[of]]~~ for the terminal and ~~[[a]]~~ certain information ~~[[of]]~~ for the
21 access point ~~to the terminal~~;

22 obtaining a first telephone number, with the obtaining of the first telephone number
23 performed by:

24 when the terminal receives the terminal information,
25 retransmitting the received terminal information to the proxy server

26 through the access points ~~when the terminal receives the terminal~~
27 ~~information;~~

28 setting the first telephone number to a predetermined unused
29 telephone number;

30 considering, by the proxy server, ~~[[the]]~~ authentication of the
31 first telephone number transmitted from the terminal ~~by the proxy~~
32 ~~server~~ by the setting of the first telephone number to the
33 predetermined unused telephone number;

34 requesting by the proxy server, the location server to transmit
35 a second telephone number and registration information ~~[[of]]~~ for the
36 corresponding terminal by transmitting the received terminal
37 information to the location server;

38 transmitting to the proxy server, by the location server, the
39 second telephone number and the registration information ~~[[of]]~~ for
40 the corresponding terminal ~~to the proxy server~~ by retrieving a
41 database;

42 transmitting the received second telephone number and the
43 registration information to the access point; and

44 transmitting to the terminal, ~~[[by]]~~ from the access point the
45 second telephone number and the registration information ~~[[of]]~~ for
46 the terminal ~~to the terminal~~ by inputting information obtained within
47 an error message; and

48 registering the terminal.

49 28. (Currently Amended) The method of claim 27, with the registering of the terminal,
50 comprising:

51 receiving by the terminal, the second telephone number and the registration information from
52 the proxy server performing a registration process after setting new values, with the terminal
53 encoding the received second telephone number and the registration information to a predetermined
54 format;

55 transmitting, to the access point, the second telephone number and the registration
56 information ~~to the access point~~ by using a register method;

57 sending by the access point, the second telephone number and the registration information
58 to the proxy server;

59 receiving by the proxy server, a register message from the terminal, comparing the register
60 message, and when the register message is successful, the proxy server transmitting the register
61 message to the location server, to perform registration; and

62 transmitting, by the location server, a predetermined successful message after performing the
63 registration, and when any problem is generated, the location server transmitting a predetermined
64 error message, and informing of a reason for the error message.

1 29. (Original) The method of claim 28, wherein the terminal information includes Internet
2 protocol address, Subnet, and domain name server information of the terminal.

30. (Canceled)

1 31. (Currently Amended) The method of claim 27, with the registering of the terminal,

2 comprising:

3 receiving by the terminal, the second telephone number and the registration information from
4 the proxy server performing a registration process after setting new values, with the terminal
5 encoding the received telephone number and the registration information to a predetermined format;

6 transmitting, to the access point, the second telephone number and the registration
7 information ~~to the access point~~ by using a register method;

8 sending by the access point, the second telephone number and the registration information
9 to the proxy server;

10 receiving by the proxy server, a register message from the terminal comparing the register
11 message, and when the register message is successful, the proxy server transmitting the register
12 message to the location server, to perform registration; and

13 transmitting, by the location server, a predetermined message informing of a status after
14 performing the registration .